REMARKS

In the present application, claims 5-7, 12-14, and 19-21 are pending. Claims 5-7, 12-14, and 19-21 are rejected. As a result of this response, claims 5-7, 12-14, and 19-21 are in condition for allowance.

Claim Rejections – 35 USC § 102

The Examiner rejected claims 5, 12, and 19 as being anticipated by Niles et al. (PGPUB: US 2003/0135709) while repeating verbatim the grounds for rejection set forth in the Office Action of October 14, 2005. Specifically, the Examiner asserted that Niles discloses "selecting a new storage volume (by selecting a segment from volume B or C in the first storage group from the free list) from a first plurality of storage volumes that constitute a first storage group (first group comprised of volumes A, B and C in Figure 4, Reference 225) in response to encountering an end of a current storage volume (section 0085, lines 29-41 and section 0086); and if unsuccessful in selecting a new storage from the first storage group (unsuccessful when the end of an allocated disk area on a current drive has been reached; refer to section 0041), selecting another new storage volume from a second plurality of storage volumes that constitute a second storage group (storage volumes located on another physical drive, refer to section 0041); and linking the second group as an extend-to-new (expansion) volume group for end of volume encounters of the first plurality of storage volumes of the first group (section 0041, section 0038, lines 6-14, section 0047, lines 7-20)."

Responding to the Applicant's arguments of February 16, 2006, the Examiner asserted, "Regarding Applicant's arguments with respect to Niles et al., the Examiner disagrees. Niles teaches linking a new storage device to first storage volume when the first storage volume has reached full capacity; this feature is functionally equivalent to Applicant's linking a second volume group to a first volume group when the first volume group reaches the end of its storage. The Applicant's use of terminology is different from the prior art but the functionality is the same."

Applicant's respectfully respond that the Applicant's "use of terminology" is not

different from the prior art, that Niles does not teach linking a new storage device to a first storage volume when the first storage volume has reached full capacity, and does not teach an equivalent, functional or otherwise, to linking a second volume group to a first volume group.

Claim 5 recites:

> 5. A method for reducing ABENDs in a data processing system when a job encounters an end of a current storage volume, said method comprising:
>
> (a) in response to said encounter, selecting a new storage volume from a first plurality of storage volumes that constitute a first storage group;
>
> (b) if step (a) is unsuccessful, selecting another new storage volume from a second plurality of storage volumes that constitute a second storage group; and
>
> linking said second group as an extend-to-new volume group for end of volume encounters of said first plurality of storage volumes of said first group.

Applicants first address the Examiner's assertion that the Applicant's use of terminology is different from that of the prior art but the functionality recited in the claims is the same. Applicants respectfully assert that functionality recited in claim 5 is directly tied to the terminology recited and that the Applicant's use of terminology is in accord with the prior art. As Niles states at paragraph [0048], "The prior art method of defining volumes and allocating their disk space is shown in the left column of FIG. 4, in which a storage device 200 contains three volumes 205, 210, 215 of varying capacities. **All of the disk space that will be used is reserved for the volume at the moment that it is created. With the prior art method, if a 1-terabyte volume is required, then a terabyte storage system will need to be physically present when the volume is created.**"

The use of "volumes" to logically define a storage entity consisting of physical storage media is well known. Such volumes may defined, for example, through the use of a volume serial number (volser) and typically refer to one or more reels of magnetic tape, disk packs, or

parts of a disk storage module. As a result, the defined volumes explicitly refer to physical storage space at their time of creation. Niles makes clear in the above recited passage that, as used and understood in the art, a defined volume is a reference to disk space that needs "to be physically present when the volume is created".

With this background in mind, it is evident that it is Niles' use of the term "volume" that differs from the prior art. More precisely, Niles' atypical use of the term "volume" is required by Niles in order to disclose a functionality that is demonstrably different from that recited in claim 5. Claim 5 recites, upon encountering an end of a current storage volume, selecting a new storage volume from a first storage group, and, if unsuccessful, selecting another new storage volume from a second storage group and linking the second storage group to the first storage group.

In contrast, Niles teaches defining "volumes" whose logical sizes are in excess of the physical storage space available at the time they are defined. In the Abstract section of Niles, it is explicitly stated that there is disclosed "a method for establishing one or more volumes, where the one or more volumes define an area of the memory that is accumulatively greater than the actual memory capacity, thus allowing for memory to be added at a later time". As a result, Niles use of the term "volume" refers to a different construct than is understood in the art when referring to volumes. As stated above, and described more fully below, this difference is directly related to a fundamentally different functionality than is recited in claim 5.

The Examiner repeatedly cites to paragraph [0041] of Niles as disclosing the selection of additional storage from a first and second storage group. Specifically, the Examiner asserts that Niles discloses that "if unsuccessful in selecting a new storage from the first storage group (unsuccessful when the end of an allocated disk area on a current drive has been reached; refer to section 0041), selecting another new storage volume from a second plurality of storage volumes that constitute a second storage group (storage volumes located on another physical drive, refer to section 0041)". Applicants respectfully assert that Examiner is in error when characterizing the teachings of Niles. At paragraph [0041], Niles simply teaches that when writing to a defined volume, if the actual allocated disk area on its current physical

drive is reached, there may be another physical drive available to continue the expansion of data written to the volume.

Recall that Niles is directed, in general, to teaching a method whereby volumes can be defined with only a portion of the associated defined size being present in the form of available physical storage space. As a result, there exists the possibility that one will access space on a volume that is logically available but not physically present. In this instance, Niles teaches that there may be available another physical drive to be allocated and associated with the existing volume. Nowhere does Niles teach **selecting a new storage volume** in the event that the end of a current storage volume is encountered as claimed. Rather, Niles teaches associating a physical drive, if available, to a defined volume when the physical storage space associated with the volume is exceeded.

Niles makes this point explicitly clear at paragraph [0048] wherein it is disclosed that:

> With the prior art method, if a 1-terabyte volume is required, then a terabyte storage system will need to be physically present when the volume is created. However, with the present invention the DA will not require that the entire 1-terabyte volume be present; instead only a percentage of the volume that is necessary to satisfy the users' initial needs is required. For example, **if it is anticipated that a 1-terabyte volume is required for the system, but it would take approximately 6 months to fill 500 MBs of the volume, then the administrator could create the 1-terabyte volume having only 500 MBs of actual physical memory present and add an additional 500 MBs of physical memory or more, when needed**.

As is clear from this passage, Niles teaches manually adding physical memory to previously created volumes as the volume fills up. Niles is notably silent on any actions to be taken in the event that "a job encounters an end of a current storage volume" as claimed. It is further of note that, while the "volumes" of Niles are implemented differently from those known in the art, Niles is directed to operating, behind the scenes so to speak, to making these differences invisible to users. However, this "behind the scenes" functionality of Niles is directed to adding physical memory to previously defined volumes and is most emphatically not equivalent to the claimed selection of new storage **volumes**.

For the above stated reasons, Niles et al. fails to teach more than one recited element of claim 5. As a result claim 5 is in condition for allowance. As claims 12 and 19 recite elements similar to those discussed above, for the reasons discussed above, claims 12 and 19 are similarly in condition for allowance.

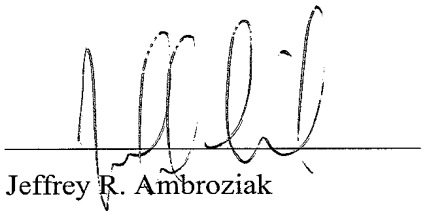
Claim Rejections – 35 USC § 103

The Examiner rejected claims 6-7, 13-14 and 20-21 as being unpatentable over Niles et al. In asserting these rejections, the Examiner cites no art other than Niles et al. As discussed above, claims 5, 12, and 19 are in condition for allowance. As all of claims 6-7, 13-14 and 20-21 depend upon claims 5, 12, and 19, they are likewise in condition for allowance.

An earnest and thorough attempt has been made by the undersigned to resolve the outstanding issues in this case and place same in condition for allowance. If the Examiner has any questions or feels that a telephone or personal interview would be helpful in resolving any outstanding issues which remain in this application after consideration of this amendment, the Examiner is courteously invited to telephone the undersigned and the same would be gratefully appreciated.

It is submitted that the claims herein patentably define over the art relied on by the Examiner and early allowance of same is courteously solicited.

Respectfully submitted:



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